

REMARKS

This is in response to the Office Action that was mailed on January 22, 2003. Claim 1 is amended to define R³ as hydrogen, thus rendering claim 2 superfluous. Claim 1 is also amended to disclaim compounds allegedly taught by the Behrens reference. No new subject matter is introduced by this Amendment. Entry of this Amendment in order to place the application into condition for allowance, or into better condition for appeal, is respectfully solicited. With this Amendment, claims 1, 4, and 6-17 are in the case.

Rejection Under 35 U.S.C. §112

Claims 1, 4, 6, and 12 were rejected under the second paragraph of 35 U.S.C. §112 as allegedly failing to define the invention properly. The proviso in claim 1 is amended to recite "when n represents 0 and R² is ..., B is not" rather than "when n represents 0 and B is ..., B is not". It is respectfully submitted that this obviates the formal rejection stated by the Examiner.

Rejections Under 35 U.S.C. §102

Claims 1, 2, 4, 7, and 17 were rejected under 35 U.S.C. §102 as allegedly being anticipated by Cho et al . and others. The Examiner stated that the reference teaches 4-methyl-piperazinyl while the proviso herein excludes 4-methyl-piperidinyl. The proviso herein is amended to exclude 4-methyl-piperazinyl. Accordingly, these rejections are obviated by the disclaimer recited in claim 1 as amended.

Rejections Under 35 U.S.C. §103

Claims 1, 2, 4, and 6-17 were rejected under 35 U.S.C. §103 as allegedly being obvious from Aebi. The Aebi reference shows compounds in which R³ (in the formula given in Applicants' claim 1) is not a hydrogen atom. However, the claims as amended herein require that R³ be hydrogen. Nothing in Aebi teaches or suggests the compounds of the claims in their present form.

Claims 1, 2, 4, and 6-17 were rejected under 35 U.S.C. §103 as allegedly being obvious from Simmonds. This ground of rejection is respectfully traversed. The presently claimed compounds are admittedly different in structure from the compounds of the reference. The reference teaches that its compounds have CNS activity. Nothing in the Simmonds reference or in the knowledge base of those having ordinary skill in the art suggests that Applicants' "variants" of the Simmonds compounds would have serotonin receptor and muscle relaxant activity. It is by now axiomatic in U.S. patent law that a compound and its properties are inseparable. Accordingly, the record fails to establish a *prima facie* case of obviousness against the novel serotonin receptor/muscle relaxant compounds presently claimed.

Claims 1, 2, 4, and 6-17 were rejected under 35 U.S.C. §103 as allegedly being obvious from Behrens. The Examiner argues that Applicants' proviso excludes 1-naphthyl derivatives, but that a person of ordinary skill in the art would be motivated to make structural isomers, namely the claimed 2-naphthyl derivatives. The claims as amended herein exclude the allegedly novel 2-naphthyl derivatives, thereby obviating this ground of rejection.

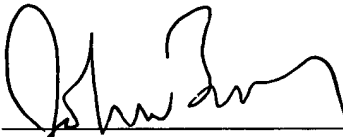
C nclusi n

Should there be any issues remaining in this application that require discussion, the Examiner is invited to contact Mr. Richard Gallagher, Registration No. 28,781, at (703) 205-8008.


If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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By: 

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Enclosure:

Marked Up Version Showing Amendments.

Marked Up Version Showing Amendments:

In the Title:

The title has been amended as follows:

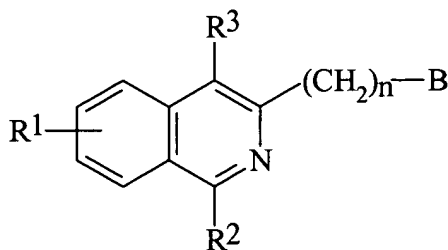
CERTAIN 1,3-DISUBSTITUTED ISOQUINOLINE DERIVATIVES.

In the Claims:

Claim 2 has been canceled.

The claims have been amended as follows:

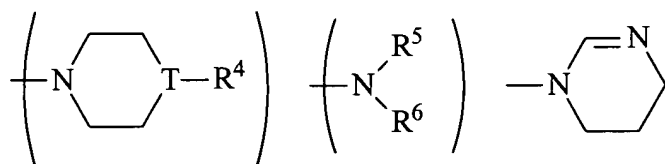
1. (thrice amended) A condensed pyridine compound represented by the following formula, its pharmaceutically acceptable salt or hydrates thereof



wherein,

R¹ represents a hydrogen atom, a halogen atom, a lower alkyl group or a lower alkoxyl group;

R² represents a 4-morpholinyl group, a 1-imidazolyl group, a 1-lower alkyl homopiperazin-4-yl group or a group selected from the groups represented by the following formulae:



(wherein, T represents a nitrogen atom or a methine group;

R³ represents a hydrogen atom [, a halogen atom, a lower alkyl group or a lower alkoxy group];

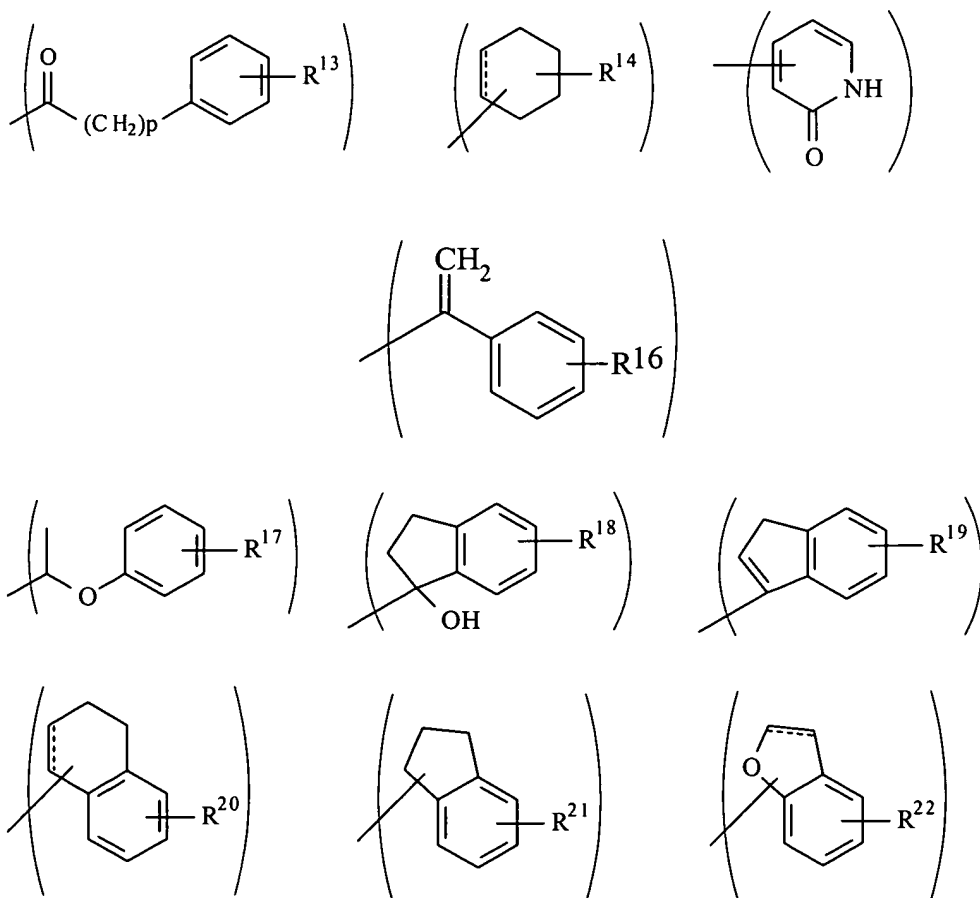
R⁴ represents a hydrogen atom, a lower alkyl group, a hydroxy lower alkyl group, a halogenated lower alkyl group, a lower cycloalkyl group, an aryl group, an aralkyl group, 1-piperidyl group, an alkenyl group, a cyano lower alkyl group, a carbamoyl lower alkyl group, a lower acyl group, an aromatic acyl group, a lower alkoxy carbonyl group, an aryloxy carbonyl group or an aralkyloxy carbonyl group;

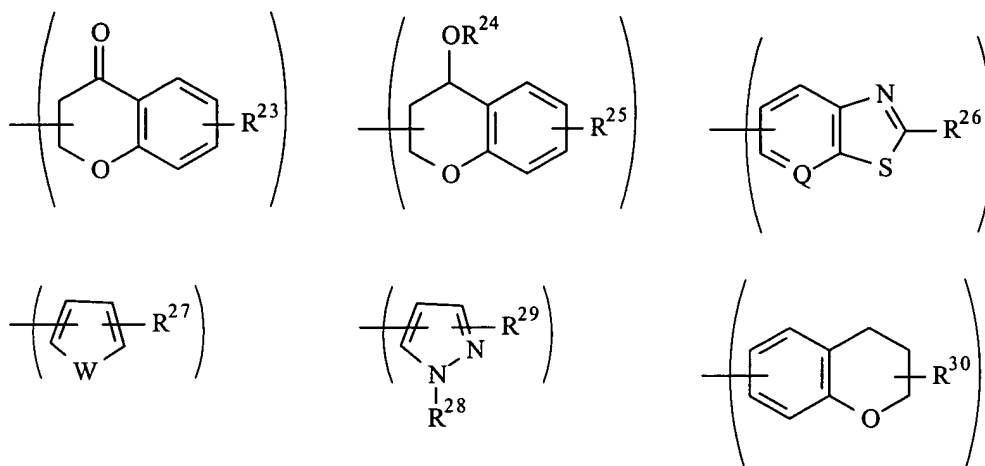
R⁵ and R⁶ are the same as or different from each other and each represents a hydrogen atom, a lower alkyl group, a di lower alkyl aminoalkyl group, an optionally substituted heteroaryl lower alkyl group);

n represents 0 or an integer of 1 to 6; and

B represents an optionally substituted aryl group, an optionally substituted heteroaryl group, an optionally substituted aralkyloxy group, an aryl(hydroxy)alkyl group, an aromatic acyl amino group, an arylsulfonylamino group, a lower alkoxy arylsulfonylamino group, a hydroxy lower alkoxy styryl group, a lower alkoxy aryloxy group, 4-phenylpiperidin-1-yl group, 4-

pyridylpiperidin-1-yl group, an optionally substituted arylalkenyl group, an optionally substituted arylalkynyl group, an optionally substituted heteroarylalkenyl group, an optionally substituted heteroarylalkynyl group, an aromatic acyl alkynyl group, an optionally N-substituted amino lower alkyl group, an optionally substituted arylamino group, an optionally substituted aralkylamino group or a group selected from the groups represented by the following formulae:





(wherein p represents 0 or an integer of 1 to 6;

R¹³, R¹⁴, R¹⁶, R¹⁷, R¹⁸, R¹⁹, R²⁰, R²¹, R²², R²³, R²⁵, R²⁷ and R²⁹ independently represent a hydrogen atom, a halogen atom, hydroxyl group, a lower alkyl group, a lower alkoxy group, a hydroxy lower alkyl group, a hydroxy lower alkoxy group or tetrahydropyranyl group;

R²⁴ represents a hydrogen atom or a lower alkyl group;

R²⁶ represents a hydrogen atom or a hydroxy lower alkyl group;

R²⁸ represents a hydrogen atom or a lower alkyl group;

R³⁰ represents a hydrogen atom, a lower alkyl group, a lower alkoxy group, a hydroxy lower alkyl group or a hydroxy lower alkoxy group;

W represents sulfur atom or oxygen atom; and

the bond represented by the following formula:



represents a single or double bond;

provided that: when n represents 0, B is not naphthyl [1-naphthyl]; when n represents 0 and R² is 1-imidazole, B is not phenyl; and when n represents 0 and [B] R² is 4-methylpiperazin-1-yl [4-methylpiperidin-1-yl], B is not bromophenyl, chlorophenyl, methoxyphenyl, or tolyl.